

Micro Gauntlet

10 Liner BASIC Contest 2021 - <https://gkanold.wixsite.com/homeputerium>

Category: WILD

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Platform: ZX Spectrum 48K

Language: Sinclair BASIC

Emulator advised: Spectaculator

Format: .tap

After loading, the game starts by itself since it was saved using SAVE "GAUNTLET" LINE 1

Controls: O-P-Q-A and M for using a potion.

The plot

As it is in the original game, run through as many stages as you can before your health is exhausted.

Avoid the ghosts, they are slow enough to run across them, but if they touch you, your health will lose 20 units; and if you hit them, 50 units of health will be lost.

Unfortunately, Elf cannot shoot (he was born with just 10 BASIC lines to define his features) but someone has left magic potions than can make ghosts disappear (not forever, since they will immediately appear from the bottom left part of the dungeon)

Collect keys to open doors.

You start the challenge having 1 key and 1 potion, and 999 units of health.

How many dungeons are you able to cross? Let's see...

The Code

Just 10 lines in Sinclair BASIC are quite challenging because this dialect lacks of ELSE command, so using IF is very restricted (one per line as much), and you have to use many logical functions, that make the code to be much slower.

Line 1: Sets the variables and the UDG, and prints the scoreboard for a new run.

Line 2: Sets the scoreboard for a new stage, and creates a random stage putting 1 potion, 3 keys and 10 doors. Maybe the potion and keys can be overlapped by walls and doors, so they will be erased.

Line 3: Sets the variables for starting the stage, and puts the 20 ghosts into the dungeon.

Line 4: Ghosts' algorithm. Their coordinates are stored in a (20,3) matrix, first 2 elements are **y,x** and the 3rd element means 1 if the ghost exists, or 0 if it does not exist (because he collided with the Elf). In this line the ghost moves towards Elf, comparing **y,x** coordinates of both, and checks if the ghost has touched Elf. Variables **f** and **c** set is the number of the ghost to be moved in each loop. Variable **l** is +1 for going left, -1 for right. Variable **v** is +1 for down, and -1 for up.

Line 5: Elf's algorithm, checking pressed keys, and checking if a door was touched, opening it if Elf has a key. Variable p is +1 for going left, -1 for right. Variable o is +1 for down, and -1 for up.

Line 6: Potion release. It checks if the potion key was pressed, in which case makes all ghosts disappear, setting their new coordinates to the bottom left side of the dungeon.

Line 7: Erasing and printing the Elf in the new position, and checking if he is still alive (health above 0, this is variable z)

Line 8: Checking ghosts contact. Variable w is the attribute of the new position of Elf, if it matches Ghost color (white ink with bright, this is, ATTR=71) this means that Elf has touched a ghost, losing 50 units of health. If health is lower than 1, game over message appears and a new run starts.

Line 9: Checking exit. Idem, if w value is 7 (white ink, no bright) this means that Elf has reached the exit pit, going to line 2 to create the new stage.

Line 10: Collecting key or potion. Attribute for key is 6 (yellow ink, no bright), and for potion is 1 (blue ink, no bright). Logical functions are used to increase k (keys) or q (potions) depending on w. It prints the number of keys and potions, and makes the loop to line 4.